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Reaction of 3,3-dichloropentane-2,4-dione with aromatic aldehydes under the conditions of Darzens reaction

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Abstract

3,3-Dichloropentane-2,4-dione reacts with aromatic aldehydes under the conditions of Darzens reaction to give 4-acetoxy-4-aryl-3,3-dichlorobutan-2-ones, the products of insertion into the σ-C-C bond. The reaction of ethyl dichloroacetylacetate with benzaldehyde yields a derivative of tricyclo[5.1.0.03,5]octane, rather than 2,6-bis(1′-chlorobenzylidene)cyclohexane-1,4-dione, as the by-product.

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Keywords

3,3-dichloropentane-2,4-dione, Darzens reaction, insertion reaction, 3,3-dichlorobutan-2-one, cyclohexane-1,4-dione, tricyclooctane, X-ray structural investigation